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10/589,451	08/11/2006	Cam Brensinger	NEMO-001XX	7059

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EXAMINER

COMLEY, ALEXANDER BRYANT

ART UNIT	PAPER NUMBER
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3746

MAIL DATE	DELIVERY MODE
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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/589,451	Applicant(s) BRENSINGER, CAM	
	Examiner ALEXANDER B. COMLEY	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 1-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/11/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of the Claims

1. Examiner acknowledges receipt of Applicant's election and response to restriction requirement mailed on March 27th, 2008. Applicant has elected without traverse **Claims 15-24** directed to a manually operated air pump for further prosecution in the instant application. Consequently, Claims 1-14 have been withdrawn, and will not be further examined.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claim 22** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 22 recites the limitation "said bellows shaped pump" in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

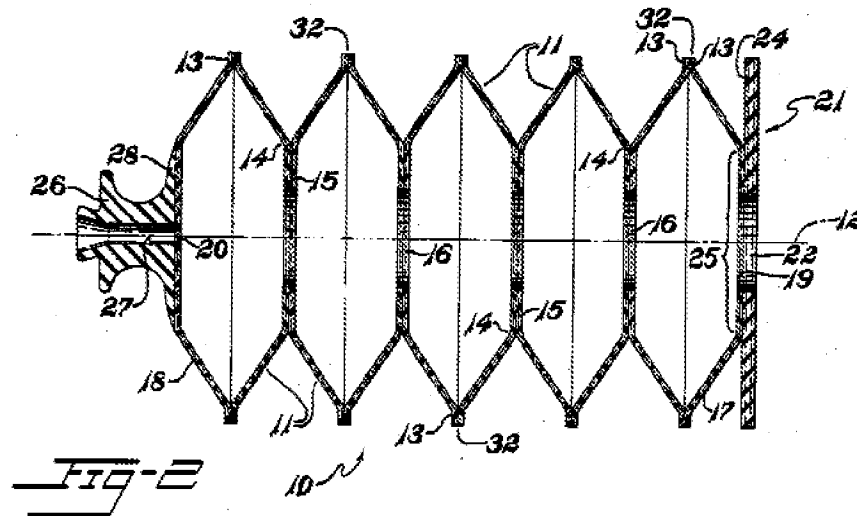
4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. **Claims 15, 17, & 20** are rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent No. 2,686,006 to Hasselquist directed to a Pneumatic Bellows Pump



In regards to Independent **Claims 15 & 20**, and with particular reference to Figure 2 shown immediately above, Hasselquist (2,686,006) discloses:

(15) A manually operated air pump, comprising: a pump (10) formed of a fabric type material and having an inlet (19, 22) for allowing said pump (10) to be inflated with the air, and an outlet (20, 27) adapted to discharge the air contained within said pump (10) when said pump (10) is compressed, said pump (10) adapted to take on and generally maintain a generally flat shape when compressed.

(20) A manually operated air pump, comprising: a pump (10) formed of a fabric type material and having an inlet (19, 22) for allowing said pump (10) to be inflated with the air, and an outlet (20, 27) adapted to discharge the air contained within said pump (10) when said pump (10) is compressed, said pump (10) adapted to take on a generally flat shape when compressed.

As can be seen in Figure 2 above, Hasselquist discloses a manually-operated bellows pump designed to pump air from the inlet (19, 22) to the outlet (20, 27) in order to fill an inflatable device with air. Hasselquist specifically discloses the use of fabric type material for the body of the pump by stating "In the preferred construction, the hollow body 10 may be made of square-woven, straight-laid textile fabric of filamentary material such, for example, as cotton, linen, rayon, nylon, glass fibers or the like, which fabric has stretch-resisting characteristics and is made substantially impervious or air-tight by being coated thinly and continuously on at least one side and, desirably on both sides with an elastic composition of rubber, natural or synthetic, or other rubber-like or synthetic Material having substantially similar chemical composition or physical properties to natural rubber and resistant to aging and abrasion." (Column 2, Lines 41-54) Furthermore, due to its bellows shape, the pump assumes a generally flat shape when compressed.

6. Regarding dependent **Claim 17**, and as stated in the analysis of Claims 15 & 20, the body of Hasselquist's pump utilizes a bellows shape in order to effectively force air into the inlet, through the inner air chamber, and out of the outlet.

Claim Rejections - 35 USC § 103

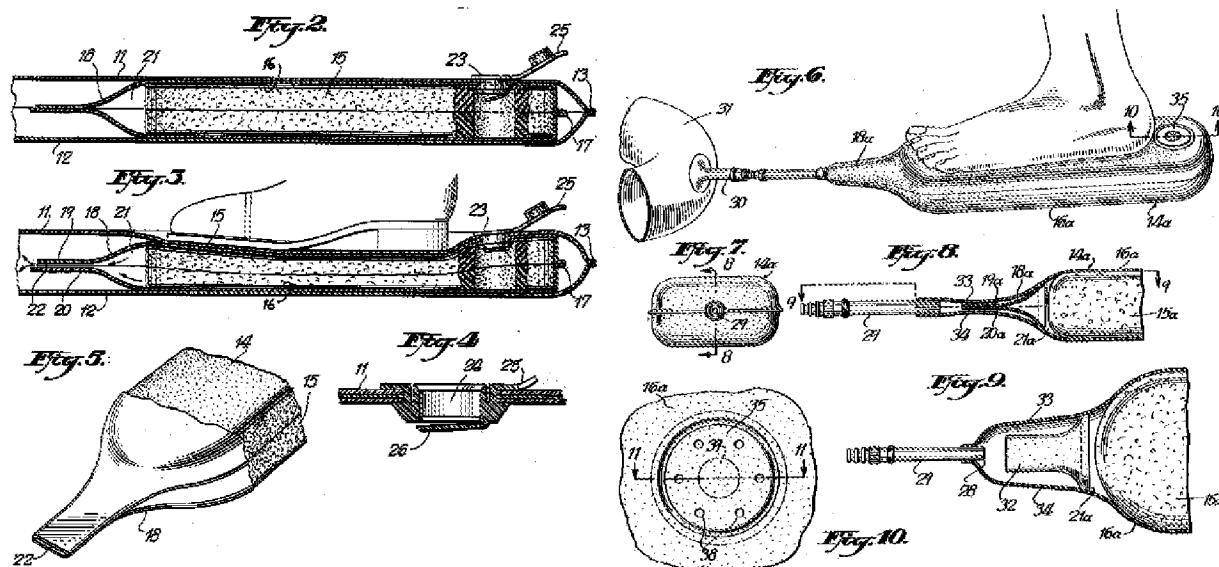
7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. **Claims 16, 18-19, & 21-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 2,686,006 to Hasselquist directed to a Pneumatic Bellows Pump in view of United States Patent No. 3,133,696 to Miranda directed to a Pump.



Regarding dependent **Claims 16 & 21**, and with particular reference to Figures 2-10 seen immediately above, the Mirando portion of the combination discloses a manually-operated air pump that utilizes inlet and outlet check valves (35, 32) disposed respectively within the inlet and outlet. In particular, Mirando discloses an inlet check valve by stating "The upper flap 33 is provided with a check valve 35 in a portion of the envelope 16a of the pump 14a substantially removed from the funnel 18a. The valve 35 consists of a substantially rigid disc 36 of plastic or other material which is heat-sealed or otherwise attached to the envelope 75 16a, the attachment being made about the periphery of the disc 36 for a purpose to be presently described." (Column 4, Line 70 – Column 5, Line 1) Mirando further describes the outlet check valve by stating "The opening 23 in the funnel 18a has secured therein a check valve 32. The valve 32 is in essence the same as the flaps 19 and 20 in FIGURE 3 with the flaps 33 and 34 in FIGURE 9 being equivalent to the extensions of 60 the upper 11 and lower 12 sheets of the mattress 10." (Column 4, 56-60) In regards to dependent **Claims 18-19**,

Hasselquist in view of Mirando discloses the claimed invention except for the second valve. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize more than one inlet/outlet valve in order move air through the pump chamber more efficiently since it has been held that the mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. Furthermore, the function of providing a moisture vent fails to define over the prior art since any valve which can be opened to the surrounding atmosphere serves this drying function. Regarding dependent **Claim 22**, the Mirando portion of the combination discloses the use of self-returning foam within the air chamber in order to effectively return the air pump to its original shape following compression. In particular, Mirando discloses "The cellular material is preferably provided in block form as illustrated in Figures 2 and 3 but may, if desired, be of shredded foam material. In addition to being cellular and of open cell construction, the filler material 15 must be easily compressible and be substantially resilient or elastic so that it will return to its original shape once pressure is removed." (Column 2, Lines 49-55) Finally, in regards to dependent **Claims 23-24**, the Mirando portion of the combination discloses a quick fill valve equipped with a closure member to provide the function of a dump type valve. In particular, Mirando states "The valve 23 has an opening 24 therethrough such that the chamber 21 is in communication with the atmosphere. The upper or outer portion of the valve 23 is provided with a closure member 25 which is preferably hinged to or formed integrally with the valve 23. This closure member serves to close the opening 24 in the valve 23 to prevent the flow of air

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either into or out of the chamber 21.” (Column 3, Lines 25-33) Therefore, to one of ordinary skill desiring a more efficient air pump device, it would have been obvious to utilize the techniques disclosed in Hasselquist in combination with those seen in Mirando in order to obtain such a result. Consequently, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the pump unit of Hasselquist with the automated inlet/outlet check valves, foam material, and dump valve of Mirando in order to obtain predictable results; those results being a more efficient air pump.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following selected patents and technical literature is cited to further show the state of the art in manual air pumps and related technology in general where the not all obvious salient features of the patents are disclosed as follows:

- US Patent No. 6,004,116 to Wang discloses a manually-operated air pump device with inlet/outlet check valves, a bellows shape (Figure 4A) and self-returning foam material.
- US Patent No. 5,827,052 to Wang discloses a manually-operated air pump device with inlet/outlet check valves. This reference further describes the prior art's use of self-returning foam within the pump.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEXANDER B. COMLEY whose telephone number is (571)270-3772. The examiner can normally be reached on M-F 7:30am - 5:00am EST (Alternate Fridays Off). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon C. Kramer can be reached on (571)-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alexander B Comley/
Examiner, Art Unit 3746

/Charles G Freay/
Primary Examiner, Art Unit 3746

ABC